

WHAT IS CLAIMED IS:

1. A light beam detection device comprising:  
a light-receiving means for receiving a light beam and  
5 outputting a detection signal;  
a light detection circuit for generating and outputting  
a light-emission signal based on the detection signal;  
a light-emitting means for emitting light based on the  
light-emission signal;  
10 a detection portion on which the light-receiving means  
and the light-emitting means are arranged;  
a support for supporting the detection portion; and  
a driving means for moving the support in a  
reciprocative manner in an X axis direction and a Y axis  
15 direction to form a detection region with the detection  
portion, wherein  
the light-emitting means forms an afterimage on the  
detection region when the light beam irradiates the  
detection region.

20 2. The light beam detection device as claimed in  
claim 1, wherein the light-receiving means and the light-  
emitting means are arranged close together on the detection  
portion.

25 3. The light beam detection device as claimed in  
claim 1, wherein the driving means includes an X axis  
direction driving means for reciprocating the support in the  
X axis direction and a Y axis direction driving means for  
30 vibrating the support in the Y axis direction; and  
the detection region is adjustable in size with the X  
axis direction driving means and the Y axis direction  
driving means.

4. The light beam detection device as claimed in claim 1, wherein the light-emitting means has an emission brightness that is adjustable with the light detection  
5 circuit.

5. The light beam detection device as claimed in claim 1, wherein the light detection circuit generates a comparison voltage based on the detection signal and holds a  
10 peak voltage of the comparison voltage, generates a reference voltage based on the held peak voltage, and compares the comparison voltage with the reference voltage to generate and output the light-emission signal when the comparison voltage is higher than the reference voltage.

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6. The light beam detection device as claimed in claim 1, wherein the support includes a supporting rod having a square cross section.

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7. A light beam detection device comprising:

a light-receiving element for receiving a light beam and outputting a detection signal;

a light detection circuit for generating and outputting a light-emission signal based on the detection signal;

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a light-emitting element for emitting light based on the light-emission signal;

a detection member on which the light-receiving element and the light-emitting element are arranged;

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a supporting member for supporting the detection member; and

a driving device for moving the supporting member in a reciprocative manner in an X axis direction and a Y axis direction to form a detection region with the detection

member, wherein

the light-emitting means forms an afterimage on the detection region when the light beam irradiates the detection region.

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8. The light beam detection device as claimed in claim 7, wherein the light-receiving element and the light-emitting element are arranged close to each other on the detection member.

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9. The light beam detection device as claimed in claim 7, wherein the driving device includes an X axis direction driving device for reciprocating the supporting member in the X axis direction and a Y axis direction driving device for vibrating the support in the Y axis direction; and

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the detection region is adjustable in size with the X axis direction driving device and the Y axis direction driving device.

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10. The light beam detection device as claimed in claim 7, wherein the light-emitting element has an emission brightness that is adjustable with the light detection circuit.

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11. The light beam detection device as claimed in claim 7, wherein the light detection circuit generates a comparison voltage based on the detection signal and holds a peak voltage of the comparison voltage, generates a reference voltage based on the held peak voltage, and compares the comparison voltage with the reference voltage to generate and output the light-emission signal when the comparison voltage is higher than the reference voltage.

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12. The light beam detection device as claimed in claim 7, wherein the supporting member includes a supporting rod having a square cross section.

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